

Ecological Communities on the Red Rock Lakes National Wildlife Refuge: Inventory and Review of Aspen and Wetland Systems

Prepared for:

Red Rock Lakes National Wildlife Refuge

Prepared by:

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Steve Cooper and John Carlson**

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Figure 1. Red Rock Lakes National Wildlife Refuge Study Area map

Figure 2. Mapped records of breeding and non breeding amphibians

Figure 3. Mapped observation records for 16 vascular plants of concern

Figure 4. Aspen, Wetland, Sage-steppe, and Coniferous Forest Habitats on the Refuge

Table 1. Vertebrates of Concern and Conservation Interest

Table 2. Amphibians and Reptiles of Concern on Red Rocks Lakes NWR

Table 3. Vascular Plants of Concern on Red Rock Lakes NWR

Appendix A. Red Rock Lakes National Wildlife Refuge Annotated Bibliography

INTRODUCTION

Red Rock Lakes National Wildlife Refuge (NWR) was established specifically to promote the long-term conservation of the Trumpeter Swan (*Cygnus buccinator*) (Banko 1960). The Refuge is part of a national network of lands and waters with the purpose to conserve, manage and where appropriate, restore fish, wildlife, and plant resources and their habitats. The NWR System Improvement Act of 1997¹, requires that each Refuge prepare a comprehensive conservation plan to ensure that the biological integrity, diversity, and environmental health of the system is maintained for the benefit of present and future generation of Americans. An initial planning step, used by others (Schroeder and Askerooth 1999), is to identify and understand specific resources of concern on the Refuge.

The purpose of this report is to identify and describe the current knowledge and status, of fish, wildlife and plant populations and their related habitats on the Refuge. Our goal is to eventually describe all the principle habitats on the Refuge and identify habitat use by plant and animal species of concern. This information is intended to help Refuge staff establish habitat objectives and habitat management strategies. We also identify potentially non-compatible uses and describe potential stewardship practices that Refuge staff can utilize in their efforts to maintain or restore native biological diversity on the Refuge system.

This report provides a broad overview of the important biological resources on the Refuge and more specific descriptions of quaking aspen (*Populus tremuloides*) and wetland habitats. These habitats were chosen as our initial focus because of their importance on the Refuge. Wetlands and moist meadows make up 70% of the Refuge and many resident species of concern are wetland or riparian dependent. Quaking aspen also is an important vegetation community. The distribution and pattern of quaking aspen interspersed with sagebrush steppe and coniferous forests makes these sites valuable for wildlife (DeByle 1985). Quaking aspen stands are biologically rich and often have high forb diversity. Forb and grain seeds are a food source for voles, which, in turn, are prey for owls and hawks. Quaking aspen communities with multi-age trees and standing dead provide an abundance of cavity bearing trees, which provide important nesting and roosting habitat for birds and bats (Flack 1976, Winternitz 1980, Crampton and Barclay 1998, Kalcounis and Brigham 1998). A decline in quaking aspen habitat is likely to cause changes in avian and bat diversity. The decline of quaking aspen in the Northern Rocky Region is a concern to resource managers.

¹ Public Law 105-57, 105th Congress